

CLAIMS

1. Method for controlling the functions of a work vehicle (1) comprising a drive motor (2), a driving clutch (3), a service brake (13, 14) that acts upon the motor wheels (11, 12), a working device (21) and a hydraulic pump (15) that supplies the actuators on the driving clutch (3), the service brake (13, 14) and the working device (21) with pressure medium via hydraulic pressure conduits, characterized in that the driving clutch (3) is automatically opened and the service brake (13, 14) is automatically closed when the load acting upon the working device (21) of the motor vehicle exceeds a predetermined load threshold or is activated so as to exceed.

2. Method according to claim 1, characterized in that the driving clutch (3) is opened and the service brake (13, 14) is closed when a pressure, force and or filling state height sensor (35) on the working device (21) signals a control device (22) that the hydraulic pressure available in propulsion operation for the working device (21) no longer suffices to master the load at hand.

3. Method according to claim 1 or 2, characterized in that the driving clutch (3) is opened and the service brake (13, 14) is activated when the speed of travel is zero or approximately zero.

4. Method according to claim 3, characterized in that the speed of travel of the motor vehicle is signaled to the control device (22) via sensors (33, 34) on the drive or output shafts (6, 7) of the motor vehicle wheels (8, 9) and/or on the transmission input shaft.

5. Method according to at least one of the preceding claims, characterized in that the parking brake of the motor vehicle is activated instead of or in addition to the service brake (13, 14).

6. Method according to at least one of the preceding claims, characterized in that during or after opening the driving clutch (3), the control device (22) transmits a signal for changing power preferably to a motor control device (23) or directly to the output regulating device of the drive motor (2).

7. Method according to claim 6, characterized in that the signal to the motor control device (23) triggers a reduction in the power output of the motor (2).

8. Method according to claim 1, characterized in that the driving clutch is closed again and the service brake (13, 14) and/or the parking brake is opened upon ending the working operation of the working device (21).

9. Method according to claim 8, characterized in that during closing or after closing the driving clutch (3) and opening the service brake (13, 14) and/or the parking brake, the control device (22) issues a signal to change the power output of the drive motor (2), preferably to the motor control device (23).

10. Device for controlling the functions of a work motor vehicle (1) comprising a drive motor (2), a driving clutch (3), a service brake (13, 14) that acts upon the motor vehicle wheels (11, 12), a working device (21), and a hydraulic pump (15) that supplies the actuators on the driving clutch (3), on the service brake (13, 14) and on the working device (21) with pressure medium via hydraulic pressure conduits, characterized by a control device (22) that is connected via sensor and control conduits (25, 27, 30, 36, 38, 39) to pressure, force, and/or fill level sensors (35) on the working device (21), to sensors (33, 34) for recording the speed of travel, to control valves (26, 28, 29, 31) in the conduits for supplying hydraulic pressure to the means of activation (19, 20) for the working device (21), for the service or parking brake (13, 14), and to an activation device (32) for the driving clutch (3).

11. Device according to claim 10, characterized in that the control device (22) is connected by a control conduit (24) via a motor control device (23) or directly to the power regulation device of the drive motor (2).